

line. The right-of-way for the BCP transmission line would be adjacent to the existing right-of-way for the SDG&E transmission line and would be 120 feet wide, so that the centerline would be 120 feet east of the centerline of the SDG&E right-of-way. The centerline of the SER right-of-way would be east of and adjacent to the proposed BCP transmission line right-of-way and would be 120 feet wide, so that the centerline of the SER right-of-way would be 120 feet east of the centerline of the proposed BCP right-of-way and 240 feet east of the centerline of the SDG&E right-of-way.

For both the BCP and SER transmission lines, steel lattice towers would be erected on the centerlines of the rights-of-way. The towers would be approximately 900 to 1,100 feet apart and would be roughly in line with the existing SDG&E towers in an east-west direction. In this EA, the towers for both lines will be referred to by numbers consecutively from south to north, with Tower No. 1 the first tower north of the international border and Tower No 25 just south of the substation. Similarly, the steel monopoles will be referred to by numbers consecutively from south to the north of the substation. These would all be steel monopoles except for A-frame crossing structures to allow the SER line to cross under the Southwest Power Link. The crossing structures are included in the pole numbering system as No. 2 and No. 3. All proposed features of the project are shown in Figures 2.3 through 2.6. A more detailed narrative description is in Appendix A.

2.2.2 Construction

Construction would begin with site preparation, consisting of grading of access roads, where necessary, and drilling or excavation for the steel lattice tower, steel monopole, and wooden monopole footings. Towers and monopoles would be fabricated in segments in Mexico. The towers would be carried to the construction site for each by helicopter. This would minimize the amount of laydown area required in the United States. Monopoles would be brought to the site by truck in sections and assembled in laydown areas. Principal preparation at each tower and pole location would consist of preparing concrete foundation footings. Each tower would require four footings, one on each corner; a single footing would be needed for each monopole.

Two different sizes of lattice towers would be used, depending on function (Figure 2.7). Suspension towers, used where the cables will be strung in a straight line from one tower to the adjacent ones, would have a square base 30 feet by 30 feet. The last towers at the ends of the line (“dead end” towers) and three other towers in each line (“deflection” or “turning” towers) would have a larger base, 40 feet by 40 feet. From the northernmost lattice tower in each transmission line, the conductors would pass on to steel monopoles to cross under the 500 kV Southwest Power Link to steel monopoles on the north side. Present project plans show all three 230 kV transmission lines—SDG&E’s, BCP’s, and SER’s—on steel monopoles north of the Southwest Power Link. However, it is possible

roads, or taken off-site for disposal in a permitted disposal site. A more detailed narrative description of construction is in Appendix A.

2.2.3 Areas of Construction Impact

Areas of permanent impact would be those areas where the surface of the ground would be permanently disturbed. Specifically, new access roads and footings or anchors for tower, monopole, or crossing structures are areas that would be permanently impacted. Areas of temporary impact are areas where construction activity may take place but where restoration of the surface is possible. These areas include the work areas used to erect the towers, monopoles, or crossing structures; pull sites; laydown areas for the monopoles; and the trenches for the optical cables under the 500 kV transmission line at the substation. In some places, areas of temporary disturbance would overlap.

For this EA, the calculations of areas of impact or disturbance are based on an evaluation of preliminary plans and the assumptions stated in Appendix A. As plans are refined, the exact areas of impact may change. The assessment in this EA is intended to indicate the scale of possible impacts and serve as a basis for the general calculation of mitigation requirements. It should be noted that many areas of temporary disturbance, such as work areas around towers or poles and pull sites, would certainly overlap at least partially, so the total estimate for temporary impact area is overestimated and therefore conservative (worst-case).

The areas of impact, permanent and temporary, from construction of the proposed project are presented in Table 2.1. A more detailed discussion of how the areas were calculated and the assumptions on which they are based is provided in Appendix A.

2.2.4 Operations and Maintenance

Maintenance and operations requirements include, but are not necessarily limited to, the following: (1) yearly maintenance grading of access roads; (2) insulator washing; (3) monthly aerial inspection of lines by helicopter; (4) monthly on-the-ground inspection of towers/poles and access roads by vehicle (pick-up truck); (5) air or ground inspection as needed after severe rain, lightning, wind, or sandstorms; (6) repair of tower or pole components (arms, foundations etc.) as needed; (7) repair or re-conductor of lines as needed; (8) replacement of insulators as needed; (9) painting pole or tower identification markings or corroded areas on towers or poles; and (10) response to emergency situations (outages, etc.) as needed to restore power.

For most of these operations, equipment could use the access roads and no significant additional disturbance would occur. Transmission line conductors may occasionally need to be upgraded or replaced over the life of the line. To accomplish this, the old cables are taken down and new cables are strung on the insulators in an operation similar to the